

**WIND LOAD DESIGN FOR ONE STORY RELOCATABLE
SCHOOL BUILDINGS** (Less than 2160 Sq. Ft. in Floor Area)**IR 16-4**

Reference: 2001 California Building Code (CBC), Sections 1615A – 1622A

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Discipline: Structural

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This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA, which include State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IR's. Only IR's listed in the document at <http://www.dsa.dgs.ca.gov/Pubs/default.htm> (click on "DSA Interpretation of Regulations Manual") at the time of plan submittal to DSA are considered applicable.

Purpose: The purpose of this Interpretation of Regulations (IR) is to supplement the wind forces set forth in the 2001 California Building Code (CBC), for the purposes of the design of one story relocatable school buildings having a gross floor area of less than 2,160 square feet in projects submitted to DSA under the 2001 CBC. For projects submitted under the 2007 CBC, see DSA [IR 16-7](#).

1. Environmental Site Factors:

Exposure:	C [Assumed. See Section 1619A]
Basic Wind Speed:	Per Figure 16A-1, 80 MPH recommended
Ht., Exp. & Gust Coefficient:	$C_e = 1.06$ (for less than 15'-0" in height)
Importance Factor:	$I = 1.0$

2. For the design of primary frames and systems per Section 1621A, Method 2 may be used for all structural systems. The vertical pressures are assumed to act simultaneously with the horizontal pressures. The following factors apply:

$C_q [H] = 1.3$ horizontally (on vertical projected area of structure)

$C_q [V] = 0.7$ upward (on the horizontal projected area of the structure)

Simultaneous vertical and horizontal application need not apply to:

1. Overall building stability.
2. At or below the foundation level of individual primary frames and systems for structures with substandard foundations as described in IR 16-1.

3. For the design of elements and components per Section 1622A, the design and wind pressures used to design the elements and components of the structure may use the C_q values set forth below in lieu of the values set forth in Table 16A-H, Section 2.

Roof Elements: $C_q = 1.2$

Wall Elements: $C_q = 1.2$

The requirements for local areas at discontinuities as set forth in Section 1622A, Item 2 are not applicable except for discontinuities at roof overhangs, architectural projections, eaves, canopies, cornices and similar structures. The coefficient for this discontinuity condition is:

$C_q = 1.7$ (overhang, et al.)

4. The windows and doors must be designed as required per Section 1616A to ensure that the building will perform as an enclosed structure.